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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/887,613	06/22/2001	Yoshiaki Takagi	33716	7309

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PEARNE & GORDON LLP
1801 EAST 9TH STREET
SUITE 1200
CLEVELAND, OH 44114-3108

EXAMINER

VO, HUYEN X

ART UNIT PAPER NUMBER

2655

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/887,613

Applicant(s)

TAKAGI, YOSHIAKI

Examiner

Huyen Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless – (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 8-11, 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsutsui et al. (US Patent No. 5825979).

3. Regarding claims 1, 8, and 14, Tsutsui et al. disclose a sound signal encoding apparatus, method, and a recordable media having a sound signal encoding program recorded therein and capable of being recorded by computers, comprising:

sampling means for dividing and sampling a signal inputted therein into a plurality of sound signal sections based on the frequency ranges of said sound signal (*band splitting filter 21 in figure 2*),

each of said sound sections having a pure sound component and a non-pure sound component (*col. 11, ln. 1-67*), and

encoding means for encoding said sound signal sections after quantizing said sound signal sections divided and sampled based on the frequency ranges of said sound signal (*col. 11, ln. 1 to col. 12, ln. 67 and see figure 3*),

said encoding means comprising

a deciding unit for deciding which one in said pure sound component and non-pure sound component is more than the other of said pure sound component and non-pure sound component with respect to each of said sound signal sections divided and sampled based on the frequency ranges of said sound signal (*col. 13, ln. 1 to col. 14, ln. 67*);

a first quantizing unit for quantizing only said pure sound component at a first quantization level when said deciding unit is operated to decide that said pure sound component is more than said non-pure sound component with respect to each of said sound signal sections divided and sampled based on the frequency ranges of said sound signal (*col. 14, ln. 1-67 and see fig. 11-13*); and

a second quantizing unit for quantizing both said pure sound component and said non-pure sound component by way of the predetermined bits of data allocated to both said pure sound component and said non-pure sound component when said deciding unit is operated to decide that said non-pure sound component is more than said pure sound component with respect to each of said sound signal sections divided and sampled based on the frequency ranges of said sound signal sampled based on the frequency ranges of said sound signal (*col. 14, ln. 1-67 and see fig. 11-13, when tonal components are less than predetermined parameters, as described in figure 13, tonal and non-tonal components are quantized and encoded by the Noisy Component Coding Circuit 64 in figure 11*).

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4. Regarding claims 2, 9, and 15, Tsutsui et al. further disclose a sound signal cording apparatus as set forth in claim 1 which further comprises analyzing means for analyzing said sound signal inputted into said sampling means based on the psycho-acoustic model of human hearing characteristics, said deciding means being operative to decide on the basis of the results analyzed by said analyzing means about which one in said pure sound component and non-pure sound component is more than the other of said pure sound component and non-pure sound component with respect to each of said sound signal sections divided and sampled based on the frequency ranges of said sound signal (*col. 10, ln. 22 to col. 11, ln. 67*).

5. Regarding claims 3-4, 10-11, and 16-17, Tsutsui et al. further disclose a sound signal cording apparatus as set forth in claim 2 in which said analyzing means is operative to calculate the absolute amount of energy of said pure and non-pure sound components before analyzing said sound signal inputted into said sampling means based on said absolute amount of energy of said pure and non-pure sound components (*col. 14, ln. 1-67 and referring to figure 13*).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 7(1)-7(4) are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsutsui et al. (US Patent No. 5825979).

8. Regarding claims 7(1)-7(4), Tsutsui et al. do not specifically disclose a sound signal delivery system, comprises: a sound signal encoding apparatus as set forth in claims 1-4, a server unit for accumulating the sound signals coded by the sound signal coding apparatus, a plurality of terminal units for requesting said sound signals coded by the sound signal coding apparatus, and a network between said server unit and said terminal units to have said server unit and said terminal units electrically connected to each other, said sever unit being operative to deliver said sound signals coded by the sound signal coding apparatus to said terminal units trough said network when said terminal units are operative to request said sever unit to deliver said sound signals coded by the sound signal coding apparatus to said terminal units.

However, it would have been obvious to one of ordinary skill in the art at the time of invention to use the coding method above in a well-known central radio station to optimize broadcasting transmission bandwidth.

9. Claims 5-6, 12-13, 18-19, and 7(5)-7(6) are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsutsui et al. (US Patent No. 5825979) in view of Oikawa et al. (US Patent No. 6061649).

10. Regarding claims 5, 12, and 18, Tsutsui et al. do not disclose a sound signal cording apparatus as set forth in claim 2 in which said analyzing means is operative to calculate a difference between the absolute amount of energy of said pure sound component and the absolute amount of energy of said non-pure sound component before analyzing said sound signal inputted into said sampling means based on said difference between the absolute amount of energy of said pure sound component and the absolute amount of energy of said non-pure sound component.

However, Oikawa et al. teach an analyzing means is operative to calculate a difference between the absolute amount of energy of said pure sound component and the absolute amount of energy of said non-pure sound component before analyzing said sound signal inputted into said sampling means based on said difference between the absolute amount of energy of said pure sound component and the absolute amount of energy of said non-pure sound component (*col. 17, ln. 31-67*).

Since Tsutsui et al. and Oikawa et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Tsutsui et al. by incorporating the teaching of Oikawa et al. in order to identify and separate tonal from non-tonal components.

11. Regarding claims 6, 13, and 19, Tsutsui et al. further disclose a sound signal cording apparatus as set forth in claim 2 in which said analyzing means is operative to calculate the absolute amount of energy of said non-pure sound component (*see figure 13*), but fail to calculate a difference between the absolute amount of energy of said

pure sound component and the absolute amount of energy of said non-pure sound component before analyzing said sound signal inputted into said sampling means based on said absolute amount of energy of said non-pure sound component and said difference between the absolute amount of energy of said pure sound component and the absolute amount of energy of said non-pure sound component.

However, Oikawa et al. teach that a means for calculating a difference between the absolute amount of energy of said pure sound component and the absolute amount of energy of said non-pure sound component before analyzing said sound signal inputted into said sampling means based on said absolute amount of energy of said non-pure sound component and said difference between the absolute amount of energy of said pure sound component and the absolute amount of energy of said non-pure sound component (*col. 17, ln. 31-67*).

Since Tsutsui et al. and Oikawa et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Tsutsui et al. by incorporating the teaching of Oikawa et al. in order to identify and separate tonal from non-tonal components.

12. Regarding claims 7(5)-7(6), Tsutsui et al. do not specifically disclose a sound signal delivery system, comprises: a sound signal encoding apparatus as set forth in claims 5-6, a server unit for accumulating the sound signals coded by the sound signal coding apparatus, a plurality of terminal units for requesting said sound signals coded by the sound signal coding apparatus, and a network between said server unit and said

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terminal units to have said server unit and said terminal units electrically connected to each other, said sever unit being operative to deliver said sound signals coded by the sound signal coding apparatus to said terminal units trough said network when said terminal units are operative to request said sever unit to deliver said sound signals coded by the sound signal coding apparatus to said terminal units.

However, it would have been obvious to one of ordinary skill in the art at the time of invention to use the coding method above in a well known central radio station to optimize broadcasting transmission bandwidth.

Conclusion

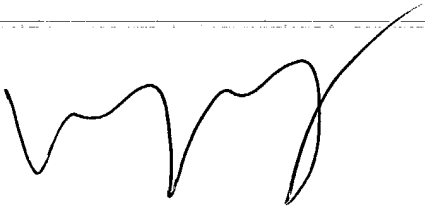
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huyen Vo whose telephone number is 703-305-8665. The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 703-305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner Huyen X. Vo

August 2, 2004



W. R. YOUNG
PRIMARY EXAMINER